

BRIDGES

NH Bridges:

However people or goods travel (automobile, truck, train, bus, bicycle, foot, snowmobile, motorcycle, or other means), bridges provide river crossings, railroad crossings, or other road crossings. Within the State of New Hampshire there are 3,795 bridges (structures 10 feet or greater in length carrying a highway), of which 2,129 are State maintained structures, and 1,666 are maintained by municipalities or other agencies/owners.

Bridge Owners	Number of Bridges
State	2,129
Municipal/Other	1,666
TOTAL Bridges	3,795

Bridges are designed today for an expected service life of 75 years. With advancements in new technology, better construction materials, and updated design standards the projected service life of newer bridges may stretch to 100 or more years. These advancements also result in less maintenance over the life of the bridge. In the past, a 50-year service life was the standard.

All state and municipal bridges in New Hampshire are inspected at regular intervals based on the bridge's ownership and its condition. All bridges deemed to be in acceptable condition are inspected every two years. Bridges whose deficient condition causes concern regarding their ability to provide safe and dependable service are inspected more frequently; for State bridges, such structures are inspected twice a year, and, for municipal bridges, such structures are inspected by the State once a year. Based on this inspection information and other data collected on each bridge, determinations can be made as to the proper course of action for that bridge. If the bridge's condition is not good, it may need rehabilitation or replacement.

Bridge Condition:

Bridge condition is a concern to the Department, municipalities, and the public. When conditions reach the status of structurally deficient, functionally obsolete, or Red List, consideration must be given to rehabilitation or replacement. Definitions of each of these conditions are as follows:

Structurally Deficient – A bridge which, due to its deteriorated condition, no longer meets current standards for load carrying capacity and structural integrity.

Functionally Obsolete – A bridge which, due to the changing need of the transportation system, no longer meets current standards for deck geometry, load carrying capacity, vertical or horizontal clearances, or bridge approach alignment.

Red List – Bridges that require more frequent inspections due to known structural deficiencies, poor structural conditions, weight restrictions, or the type of construction (such as a replacement bridge installed on a temporary basis).

Although the public may perceive Red List bridges to be those in the worst condition, this is not always true. The Red List identifies bridges requiring additional inspection efforts, as indicated above. Some of these bridges are historic, such as covered bridges, and will always remain on the Red List. These specific types of bridge structures may have lower design specifications and load carrying capacities as compared to newer bridges, and cannot likely be modified or rehabilitated to meet current design or rating capacities. In total, there are 12 of these types of structures that will probably always be on the State Red List.

The following tables and accompanying maps depict the condition of all State, Municipal, and other highway bridges as of April 2010.

Bridge Condition	State Bridges	Non State Bridges	TOTALS
Red List Bridges (Non-Historic)	130	340	470
Red List Bridges (Historic)	12	26	38
Structurally Deficient and/or Functionally Obsolete (non-Red List)	215	219	434
<i>Good Condition</i>	1,772	1,081	2,853
TOTALS	2,129	1,666	3,795

Expected Future Conditions:

The future condition of the State's bridges depends on a number of factors. The availability of funding to repair and replace deficient or obsolete bridges remains a concern. In addition, the present condition, the amount of traffic carried, and the types of loading placed on each bridge are also important considerations.

The results of bridge replacement and rehabilitation efforts over the past fifteen years show the Department's success toward reducing the total number of state Red List bridges, however, the number of bridges being added to the Red List each year offsets most of these gains. Over the past fifteen years an average of approximately 18 bridges per year have been removed from the State Red List, while over that same time period an average of approximately 16 bridges per year have been added to the State Red List. On average, the rate of bridge deterioration has limited the net decrease of bridges from the State Red List to only 2 or 3 per year. In addition, it is now taking longer to address State Red List bridges. Typically, it now takes 8 years to address a bridge on the State Red List, whereas previously, bridges were typically on the State Red List for only 5 years.

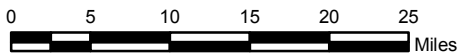
The effort towards reducing the number of bridges on the Municipal Red List shows considerable progress. Over the past fifteen years the average number of bridges removed from the Municipal Red List bridges has been approximately 26 per year. In that same time period, an average of approximately 17 bridges per year have been added to the Municipal Red List. On average, the net decrease of municipal bridges from the Red List is approximately 9 per year. However, it is recognized that there are nearly three times as many municipal Red List bridges than state Red List bridges. The State-Aid Bridge program, which provides State Funds (\$6.8 M/year with accompanying 20% municipal match) to assist municipalities with deficient bridges, is currently committed through 2018.

This Ten-Year Plan reflects the critical need to repair and maintain the State's bridges and consequently, addressing State Red List bridges has been prioritized. Approximately 64 of the 142 State Red List bridges will be replaced or rehabilitated over the next ten years within the Fiscally Constrained Ten Year Plan, and 17 Priority Bridges (not currently on the State Red List) are also included, for a total of 81 State Red List/Priority bridges addressed within the Ten Year Plan. Additionally, another 33 State Red List bridges will be addressed by Bridge Maintenance. This indicates the importance placed on State Red List bridge needs compared to previous Ten Year Plans and accelerates the relative pace of addressing State Red List bridges. The Plan also includes specific funding (\$8M/year) for addressing bridge preservation needs. Through these increased preservation efforts the rate that "near" Red List bridges are added to the State Red List will be reduced.

BRIDGE CONDITION

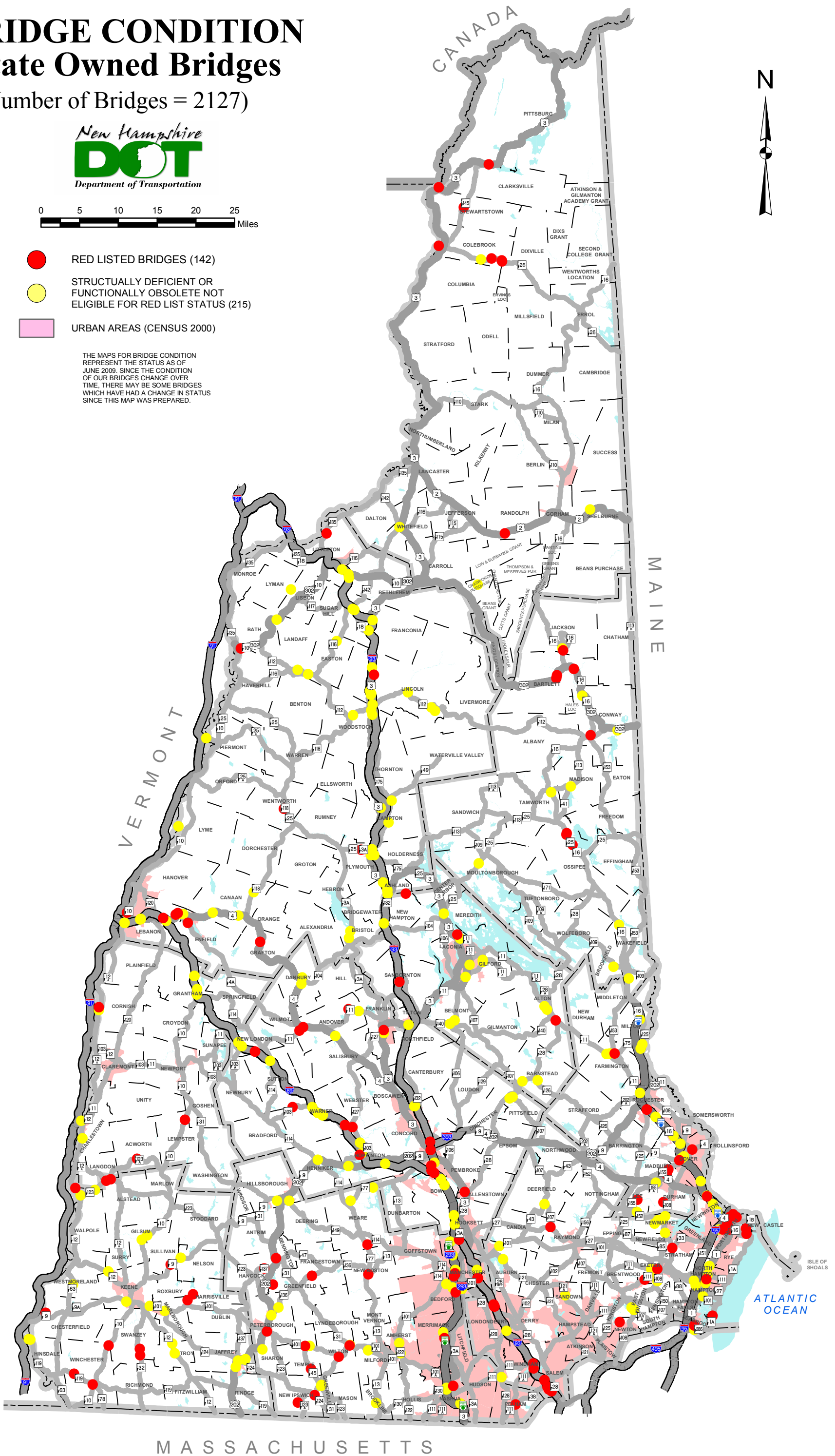
State Owned Bridges

(Number of Bridges = 2127)



- RED LISTED BRIDGES (142)
- STRUCTUALLY DEFICIENT OR FUNCTIONALLY OBSOLETE NOT ELIGIBLE FOR RED LIST STATUS (215)
- URBAN AREAS (CENSUS 2000)

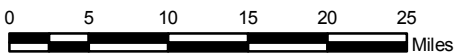
THE MAPS FOR BRIDGE CONDITION REPRESENT THE STATUS AS OF JUNE 2009. SINCE THE CONDITION OF OUR BRIDGES CHANGE OVER TIME, THERE MAY BE SOME BRIDGES WHICH HAVE HAD A CHANGE IN STATUS SINCE THIS MAP WAS PREPARED.



BRIDGE CONDITION

Municipal & Other Owned Bridges

(Number of Bridges = 1666)



- RED LISTED BRIDGES (366)
- STRUCTUALLY DEFICIENT OR FUNCTIONALLY OBSOLETE NOT ELIGIBLE FOR RED LIST STATUS (219)
- URBAN AREAS (CENSUS 2000)

THE MAPS FOR BRIDGE CONDITION REPRESENT THE STATUS AS OF June, 2009. SINCE THE CONDITION OF OUR BRIDGES CHANGE OVER TIME, THERE MAY BE SOME BRIDGES WHICH HAVE HAD A CHANGE IN STATUS SINCE THIS MAP WAS PREPARED.

